

## ABSTRACT

A method of and an apparatus for manufacturing carbon fiber coils by heating a stock gas, which is subjected to thermal decomposition to generate a solid carbon, and a catalytic gas, which promotes thermal decomposition of the stock gas, in a reaction chamber (12). The solid catalyst (15) is placed at a predetermined position within the reaction chamber (12), and the reaction chamber (12) is supplied with the stock gas and the catalytic gas. The interior of the reaction chamber (12) is heated to grow carbon fiber coils from the stock gas. During heating, substantially no electromagnetic field due to the heating is formed in the reaction chamber (12).